

REMARKS

Claims 30-35 have been added. New claims 30 and 31 depend from claim 1, new claims 32 and 33 depend from claim 12, and new claims 34 and 35 depend from claim 24. Claims 1, 12, and 24 have been amended to more clearly define Applicants' invention. Support for the new claims and the amendments to the claims can be found, for example, in the specification at pp. 17-19, and throughout the specification. No new matter has added. Upon entry of this Amendment, Claims 1-4 and 6-35 are pending. Reconsideration and allowance of the present application based on the foregoing amendments and the following remarks are respectfully requested.

Applicants thank the Examiner for conducting a personal interview with Applicants' representative on February 17, 2004. The substance of the interview is captured in these remarks.

In the Office Action, claims 1-4 and 6-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazerooni (U.S. Patent No. 6,386,513) in view of Anderson et al. (U.S. Patent No. 5,590,046). Applicants respectfully traverse this rejection.

Claim 1 is directed to an intelligent trolley module for use in an assist system that includes, *inter alia*, a plurality of wheels on the intelligent trolley module and configured to move the trolley module along a track, an actuator on the intelligent trolley module for driving at least one of the wheels in a horizontal direction, a computational node on the intelligent trolley module for controlling the actuator, and a communication interface on the intelligent trolley module for providing digital input/output communication between the computational node and a plurality of other computational nodes via a common data link.

Kazerooni discloses a human power amplifier (10) that includes a take-up pulley (11) that is attached directly to a ceiling, wall, or overhead crane and an actuator (12) that drives the take-up pulley (11). (Kazerooni at col. 5, lns. 23-26.) The actuator (12) is driven by a **separate** controller (20) via a power cable (23). (Kazerooni at col. 6, lns. 47-48, FIGs. 1 and 8.) The actuator (12) that drives the take-up pulley (11) may be connected to a trolley (81). (Kazerooni at col. 15, ln. 67, FIG. 9.)

Anderson et al. discloses an automated floor panel workcell having a plurality of machines for performing cutting and other operations on panels of sheet material. (Anderson et al. at col. 2, lns. 16-18.) The machines are not intelligent modules as recited by the claims. Anderson et al. discloses a trolley 182 that is supported on two laterally spaced rails 184 that

are fastened to the top longitudinal frame members of a cart 120. (Anderson et al., col. 7, lns. 48-53.) A controller 140 is disposed on the cart 120 and not the trolley 182.

Applicants submit that neither Kazerooni nor Anderson et al. discloses or suggests an intelligent trolley module that includes, *inter alia*, a computational node **on** the intelligent trolley module for controlling the actuator, and a communication interface **on** the intelligent trolley module for providing input/output digital communication between the computational node and a plurality of other computational nodes via a common data link, as recited by claim 1. Thus, even if Kazerooni and Anderson et al. were combinable, which Applicants in no way concede, all of the elements and limitations of claim 1 are not disclosed. Therefore, a *prima facie* case of obviousness cannot be made, and claim 1 and the claims that depend therefrom, are patentable over Kazerooni in view of Anderson et al.

Claim 12 is directed to an intelligent lift module for use in an assist device that includes, *inter alia*, an actuator on the intelligent lift module, a support connected to the actuator and configured to move a payload in a substantially vertical direction, a computational node on the intelligent lift module in communication with the actuator and configured to control movement of the payload, and a communication interface on the intelligent lift module for providing digital input/output communication between the computational node and a plurality of other computational nodes via a common data link.

Kazerooni discloses a human power amplifier (10) that includes a take-up pulley (11) that is attached directly to a ceiling, wall, or overhead crane and an actuator (12) that drives the take-up pulley (11). (Kazerooni at col. 5, lns. 23-26.) The actuator (12) is driven by a **separate** controller (20) via a power cable (23). (Kazerooni at col. 6, lns. 47-48, FIGs. 1 and 8.) Kazerooni does not disclose, *inter alia*, a computational node **on** the lift. Instead, Kazerooni teaches a separate controller 20 that is connected to the actuator 12 via a power cable 23.

Anderson et al. discloses an automated floor panel workcell having a plurality of machines for performing cutting and other operations on panels of sheet material. (Anderson et al. at col. 2, lns. 16-18.) The machines are not intelligent modules as recited by the claims. A controller 140 is disposed on the cart 120 and not on a lift, as recited by claim 12.

Moreover, Applicants submit that neither Kazerooni nor Anderson et al. discloses or suggests an intelligent lift module that includes a communication interface **on** the intelligent lift module for providing input/output digital communication between the computational node and a plurality of other computational nodes via a common data link, as recited by claim 12.

Thus, even if Kazerooni and Anderson et al. were combinable, which Applicants in no way concede, all of the elements and limitations of claim 12 are not disclosed. Therefore, a *prima facie* case of obviousness cannot be made, and claim 12 and the claims that depend therefrom, are patentable over Kazerooni in view of Anderson et al.

Claim 24 is directed to an input device for use in an assist system that includes, *inter alia*, a handle for gripping, and at least one proportional control. The input device is in communication with a computational node disposed on a multi-function hub, wherein the proportional control when moved provides a proportional output signal to the computational node, and wherein the computational node passes the output signal to a plurality of other computational nodes within the assist system via a common data link.

Applicants submit that neither Kazerooni nor Anderson et al. discloses or suggests – at least – an input device for use in an assist system that is in communication with a computational node disposed on a multi-function hub, wherein the proportional control when moved provides a proportional output signal to computational node, and wherein the computational node passes the output signal to a plurality of other computational nodes within the assist system via a common data link, as recited by claim 24. Thus, even if Kazerooni and Anderson et al. were combinable, which Applicants in no way concede, all of the elements and limitations of claim 24 are not disclosed. Therefore, a *prima facie* case of obviousness cannot be made, and claim 24 and the claims that depend therefrom, are patentable over Kazerooni in view of Anderson et al.

Moreover, Applicants submit that there is simply no motivation for one of ordinary skill in the art to combine Kazerooni with Anderson et al. because Anderson et al. expressly teaches away from such a combination. While the human power amplifier of Kazerooni expressly requires human interaction as shown in FIGs. 1 and 16, Anderson et al. expressly states that “it is an object of this invention to provide a system for manufacturing parts from flat material, requiring **little or no operator intervention** from the insertion of the flat material sheets at the input end to the removal of the finished parts from the output end.” (Anderson et al. at col. 1, lns. 46-50 (emphasis added), FIG. 1.)

Although the Examiner argues that there still may be some operator intervention, Anderson et al. does not disclose what that intervention may be. Anderson et al. makes clear that its goal is to only have operator intervention at the input end and the removal end. (Anderson et al. at col. 1, lns. 46-50 (emphasis added), FIG. 1.) Because the components of Anderson et al. are specifically designed to work without operator intervention, there would

be no motivation to combine Kazerooni with Anderson et al. at the time of Applicants' invention. Applicants respectfully submit that without any motivation to combine Kazerooni with Anderson et al., the Examiner has failed to make a *prima facie* case of obviousness.

Accordingly, Applicants respectfully submit that claims 1, 12, and 24, and the claims that depend from them – including new claims 30-35 - are patentable over Kazerooni in view of Anderson et al. and respectfully request that the rejection be withdrawn.

In the Office Action, claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazerooni in view of Santos (U.S. Patent No. 3,451,507). Applicants respectfully traverse this rejection.

Claims 7 and 8 depend from claim 1. As discussed above, Kazerooni does not disclose a computational node on the intelligent trolley module for controlling the actuator or a communication interface on the intelligent trolley module for providing input/output digital communication between the computational node and a plurality of other computational nodes via a common data link, as recited by claim 1. Santos does not make up for the deficiencies of Kazerooni. Nowhere does Santos disclose an intelligent trolley module that includes, *inter alia*, a computational node on the intelligent trolley module for controlling the actuator, or a communication interface on the intelligent trolley module for providing input/output digital communication between the computational node and a plurality of other computational nodes via a common data link.

Accordingly, Applicants submit that claims 7 and 8 are patentable over Kazerooni in view of Santos and respectfully request that the rejection be withdrawn.

In the Office Action, claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazerooni in view of Anderson et al. and further in view of Schroeder et al. Applicants respectfully traverse this rejection.

Claims 10 and 11 depend from claim 1. As discussed above, claim 1 is patentable over Kazerooni in view of Anderson et al. Schroeder et al. does not make-up for the deficiencies of Kazerooni and Anderson et al. Schroeder et al. discloses a transfer hoist system for use by a disabled person (Schroeder et al., col. 1, lns. 6-7) that includes hoist means (119) and trolley means (120). (Schroeder et al., col. 7, lns. 37-48.) FIG. 3B shows a controller (306) that is disposed on the hoist means (119). The controller (306) receives input signals from the operator via a control unit (105). (Schroeder et al., col. 7, lns. 67 – col. 8, ln. 1.)

Schroeder et al. does not disclose or suggest an intelligent trolley module that includes, *inter alia*, a communication interface on the intelligent trolley module for providing input/output digital communication between the computational node and a plurality of other computational nodes via a common data link, as recited by claim 1.

Accordingly, Applicants submit that claim 1 and claims 10 and 11 that depend therefrom are patentable over Kazerooni in view of Anderson et al. and further in view of Schroeder et al., and respectfully request that the rejection to claims 10 and 11 be withdrawn.

In the Office Action, claims 1-4 and 6-29 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 09/781,686. A terminal disclaimer is being filed herewith. Accordingly, Applicants respectfully request that the rejection be withdrawn.

All rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975, control number 007448-0303801. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
PILLSBURY WINTHROP LLP



EMILY T. BELL
Reg. No. 47,418
Tel. No. (703) 905-2261
Fax No. 703 905-2500

Date: March 15, 2004
P.O. Box 10500
McLean, VA 22102
(703) 905-2000